

Perchlorate Detection Limit For Purposes of Reporting (DLR) Review

State Water Resources Control Board (State Water Board)
Division of Drinking Water (DDW),
Regulations Development Unit (RDU)

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Outline

- **Sources of Perchlorate**
- **Regulation of Perchlorate in California**
- **Limitations with the Detection Limit for Purposes of Reporting (DLR) of 4 ppb**
- **Staff Recommendation and Board Approval**
- **Partnering with ELAP and ELTAC**
- **Summary**

Sources of Perchlorate

- Manufacturing
 - Used in solid propellant for rockets, missiles, and fireworks.
 - Imported fertilizers
- Naturally occurring
 - Atmospheric deposition of minor amounts over long periods of time.
- Impurity present in hypochlorite solutions (disinfection process)
- Cleanup sites with high concentrations resulting from:
 - Manufacturing
 - Testing
 - Disposal practices

Regulation of Perchlorate in California

- In 2007, the maximum contaminant level (MCL) for perchlorate was established at 6 parts per billion (ppb) and the DLR at 4 ppb.
- In 2015, the public health goal (PHG) was revised from 6 ppb to 1 ppb
- Health and Safety Code §116365 mandates that the MCL be set as close as possible to the public health goal (PHG), while considering cost and technical feasibility.

Limitations with the DLR of 4 ppb

- Limits the ability to fully evaluate:
 - Performance of existing treatment to reduce levels below 4 ppb.
 - Occurrence data in water sources below 4 ppb.
 - Additional public health protection
- Limits the ability to determine the technical and economic feasibility of potential lower MCL values.

Staff Recommendation and Board Approval

On July 5, 2017, the Board approved the DDW staff recommendation to revise the DLR before the MCL.

- The first regulation package would attempt to lower the DLR from the current concentration.
- If appropriate, develop a second package to revise the MCL.

Partnering with ELAP and ELTAC

- ELAP certifies laboratories for **EPA Methods 314.0, 314.1, 331.0 and 332.0**
- Through ELAP, DDW worked with members of ELTAC to develop a survey to determine laboratory capabilities for the analysis of perchlorate in drinking water.

Partnering with ELAP and ELTAC (cont.)

- DDW defined the goal.
 - Determine the lowest reportable concentration, which is both reliable and confident, using the current method EPA 314.0
- ELTAC members offered their expertise to define laboratory parameters for the survey request in order to achieve DDW's goal.

Summary

- The preliminary work has served as a framework for DDW's review of the DLR.
- A follow-up perchlorate lab survey was sent to gather additional information.